

Double Balanced Mixer

Model MC5xSMx-7 Model MC5xSMx-14

Communications Band
RF 3.5 to 15.0 GHz

Electrical Specifications:⁽¹⁾

Parameter	Conditions			Specifications		
	RF (GHz)	LO (GHz)	IF (MHz)	Min	Typical	Max
SSB Conversion loss: ^{(2) (3)}	3.7-14.5	3.7-14.5	DC-500		5.0 dB	7.0 dB
	3.7-14.5	3.7-14.5	DC-2000		5.5 dB	8.5 dB
	3.5-15.0	3.5-15.0	DC-4000		7.5 dB	9.5 dB
Isolation LO to RF: LO to IF: RF to IF: IF to RF:	3.5-15.0	3.5-15.0	DC-2000 DC-4000	26 dB	35 dB	
				21 dB	30 dB	
					23 dB	
				+20 dB		
				+14 dB		
Input 1 dB Compression Point:	3.5-15.0	3.5-15.0	DC-4000		+1 dBm +4 dBm +8 dBm +12 dBm	MC53 MC54 MC56 MC57
Input Third Order Intercept Point:	3.5-15.0	3.5-15.0	DC-4000		+11 dBm +14 dBm +18 dBm +22 dBm	MC53 MC54 MC56 MC57
LO Power: ⁽⁴⁾	3.5-15.0	3.5-15.0	DC-4000		+7 dBm +10 dBm +13 dBm +18 dBm	MC53 MC54 MC56 MC57

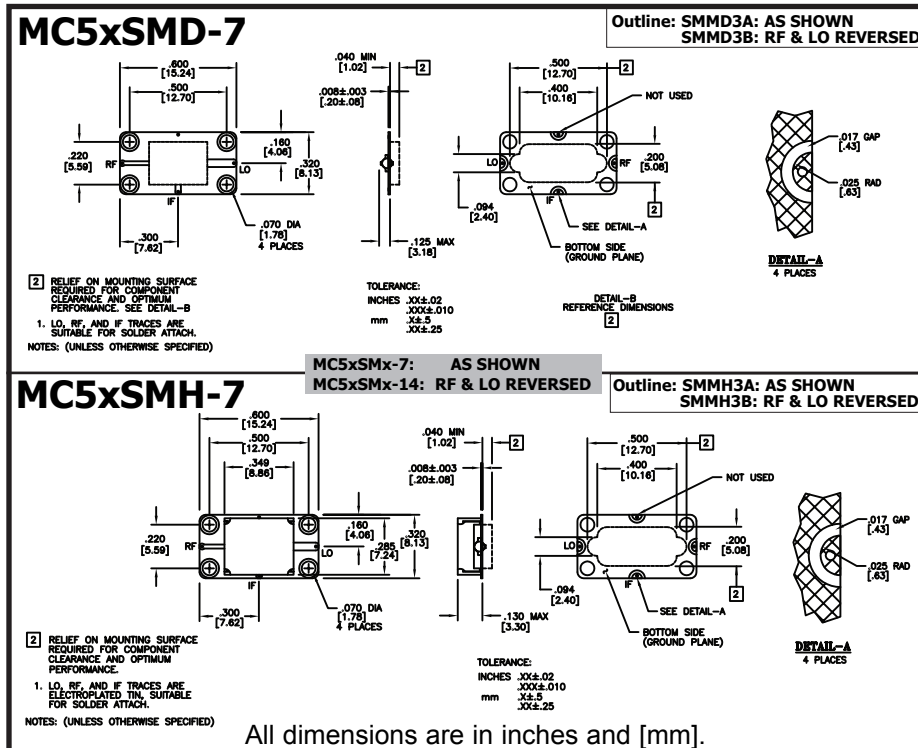
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LO Power ←
3 = +7 dBm
4 = +10 dBm
6 = +13 dBm
7 = +18 dBm

→ D = No Cover
H = With Cover

Notes:

- Specifications are guaranteed when tested as a downconverter in a 50 Ohm system at +25°C with the nominal LO power. Specifications indicated as typical are not guaranteed.
- Noise figure is typically within ±0.5 dB of conversion loss.
- Conversion loss typically degrades less than 0.5 dB at +100°C and improves less than 0.5 dB at -55°C.
- Usable LO drives are up to 2 dB below and 3 dB above nominal.
- See Application note M112, for aid in selecting the outline and for mounting and installation information.



Typical Performance at 25°C

